

## **Probing and Developing Complex Oxides**

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The advent of modern synchrotron radiation sources has enabled scientists to probe a wide range of physical and materials phenomena. Among the most challenging materials are those increasingly known as “complex materials”. They include high-temperature superconductors, colossal magnetoresistives, magnetic semiconductors, ferroelectrics, multiferroic oxides and numerous others. Synchrotron techniques can be employed to investigate many phenomena associated with these materials. Current and potential ALS efforts to study complex electronic behaviour by via three different materials, a high-T<sub>c</sub>, manganites, and multiferroics, will be discussed. Results from x-ray scattering and photoemission will be presented. In addition, both importance of and methods for growing complex oxides at the ALS will be addressed.